Name _____ Period _____

Study Guide: Genetics

1. An organism with an identical pair of alleles for a trait would be considered _____.

2. The study of heredity is called _____.

3. Different forms of a gene are called _____.

4. A _____ is the physical expression of a trait in an organism.

5. An organism with a mixed pair of alleles for a trait would be considered _____.

6. A _____ allele is the form of a gene that is expressed when present.

7. The unit by which hereditary characteristics are transmitted is called a _____.

8. A _____ allele is the form of a gene that is not expressed if only one copy is present.

9. A _____ is the genetic make up of an organism.

10. The biological inheritance of traits from parent to offspring is called _____.

11. The monk who was famous for his contributions in genetics due to his work with true breeding pea plants in the mid 1800s was _____.

12. The allele that is represented by a capital letter is the _____ allele and the allele that is represented by a lowercase letter is the _____ allele.

13. If a plant contains one tall allele and one short allele, will that plant appear tall, medium, or short?

14. Is “Yy” an example of a homozygous or heterozygous genotype?

15. List all of the genotypes that would produce a tall plant.

16. Is TT an example of a homozygous dominant, homozygous recessive, or heterozygous genotype?

17. Heterozygous literally means _____ and homozygous literally means _____.

18. Can some phenotypes be produced by more than one genotype?

19. Will a recessive allele be expressed if the dominant allele is also present?

Use the following information to answer questions 20-25.

In pea plants, smooth pods (S) are dominant over constricted pods (s). Also, round seeds (R) are dominant over wrinkled seeds (r).

20. What is the genotype for a heterozygous smooth pod?

21. What is the genotype for wrinkled seeds?

22. What is the genotype for a constricted pod?

23. What is the genotype for homozygous round seeds?

24. What is the phenotype for SS?

25. What is the phenotype for ssRr?